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**REPORT TO THE SUBCOMMITTEE ON  
EXECUTIVE REORGANIZATION AND  
GOVERNMENT RESEARCH  
COMMITTEE ON  
GOVERNMENT OPERATIONS  
UNITED STATES SENATE**

**Planning, Construction, And  
Use Of Medical Facilities  
In The San Francisco Bay Area**

B-767966

**BY THE COMPTROLLER GENERAL  
OF THE UNITED STATES**

OCT. 13. 1971

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COMPTROLLER GENERAL OF THE UNITED STATES  
WASHINGTON, D.C. 20548

B-167966

Dear Mr. Chairman:

This is our report on the results of our review of the planning, construction, and use of medical facilities in the San Francisco Bay Area. The review was made in response to your request of September 18, 1969.

The responsible Federal, State, and local health organizations have not been given an opportunity to formally examine and comment on this report, although most of the matters were discussed with their representatives during the review.

We plan to make no further distribution of this report unless copies are specifically requested and then we shall make distribution only after your agreement has been obtained.

Sincerely yours,

A handwritten signature in cursive script that reads "James B. Stacks".

Comptroller General  
of the United States

The Honorable Abraham A. Ribicoff  
Chairman, Subcommittee on Executive  
Reorganization and Government Research  
Committee on Government Operations  
United States Senate

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ABBREVIATIONS

FHA Federal Housing Administration  
GAO General Accounting Office  
HEW Department of Health, Education, and Welfare  
OEO Office of Economic Opportunity  
PHS Public Health Service  
SBA Small Business Administration

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COMPTROLLER GENERAL'S REPORT  
TO THE SUBCOMMITTEE ON  
EXECUTIVE REORGANIZATION AND  
GOVERNMENT RESEARCH  
COMMITTEE ON GOVERNMENT OPERATIONS  
UNITED STATES SENATE

PLANNING, CONSTRUCTION,  
AND USE OF MEDICAL  
FACILITIES IN THE  
SAN FRANCISCO BAY AREA  
B-167966

## D I G E S T

### WHY THE REVIEW WAS MADE

At the request of the Chairman of the Subcommittee on Executive Reorganization and Government Research, Senate Committee on Government Operations, the General Accounting Office (GAO) examined into the coordination among Federal and State agencies and local organizations in planning and constructing hospitals and skilled-nursing-care facilities in certain metropolitan areas.

GAO also reviewed the extent to which certain medical facilities and other activities of hospitals were being shared.

The reviews were made in Baltimore, Maryland; Cincinnati, Ohio; Denver, Colorado; Jacksonville, Florida; San Francisco, California; and Seattle, Washington. These areas were selected on the basis of the level of Federal financial participation in the construction of hospital and skilled-nursing-care facilities and the location of the cities throughout the United States. GAO did not review the quality of care being provided by hospitals and skilled-nursing-care facilities.

This report presents the results of our review in the San Francisco Bay area.

Federal, State, and local health organizations have not been given an opportunity to formally examine and comment on the contents of this report.

### FINDINGS AND CONCLUSIONS

#### Hospital bed need

By 1974 the bed capacity in the San Francisco Bay area may exceed the need by as many as 1,307 beds. (See p. 10.)

According to the 1970 State plan, prepared by the California State Department of Public Health (State agency), the San Francisco Bay area will need about 16,588 non-Federal hospital beds by 1974. As of January 31, 1971, the bed capacity of non-Federal hospitals in operation and under construction in the San Francisco Bay area was 17,423 beds--835 beds in excess of the 1974 projected need. There were 472 additional hospital beds which had reached advanced stages of planning.

The 1970 State plan showed that 2,805 hospital bed spaces in the San Francisco Bay area did not conform to Hill-Burton construction standards. These bed spaces were recognized in the State plan (as required by Federal regulations) as being available to meet current and future patient-care needs and were considered safe for patient care by a State agency official. (See p. 14.)

Hospital bed capacity was increasing even though the occupancy rates for most hospitals were generally low. During fiscal years 1968-70, three fourths of the hospitals had been experiencing occupancy rates below 80 percent, the rate that local officials considered adequate to yield a sufficient return on capital investment and to provide for efficient hospital operations.

#### Skilled-nursing-care bed need

The San Francisco Bay area has more skilled-nursing-care beds at the present time than it may need by 1974.

According to the 1970 State plan, the bay area will need 21,861 non-Federal skilled-nursing-care beds by 1974. As of January 31, 1971, the bed capacity of non-Federal skilled-nursing-care facilities in operation and under construction was 28,828 beds--6,967 beds in excess of the 1974 projected need. (See p. 16.)

The 1970 State plan showed that 3,817 skilled-nursing-care bed spaces did not conform to Hill-Burton construction standards. These beds were recognized in the State plan (as required by Federal regulations) as being available to meet current and future patient-care needs and were considered safe for patient care by a State agency official.

#### Control over development of medical facilities

The State agency must determine that there is a need for a proposed hospital or skilled-nursing-care facility before the project can be financed with a grant under the Hill-Burton program.

The Federal Housing Administration (FHA) and the Small Business Administration (SBA) have instituted procedures which require that financial assistance not be provided for a proposed medical facility unless a certificate of need has been issued by the State agency. In this way control of Federal funding of excess medical facilities is maintained.

In January 1970 the California comprehensive health-planning law took effect. This law requires the review and approval of the need for proposed medical facility projects by the regional comprehensive health-planning agency before licenses may be granted by the State Department of Public Health.

The organization and concept of the comprehensive health-planning agency is new, and the agency is in the process of developing criteria for determining the need for medical facilities. By consistently applying uniform criteria, the planning agency will be better able to determine the need for proposed medical facilities and thereby to curtail development of unneeded medical facilities. (See pp. 20 to 24.)

#### Sharing of medical facilities and services

In the San Francisco Bay area, there were open-heart surgery and radiation-therapy facilities in excess of patient-care needs and artificial kidney machines were underused. No authority existed to control the establishment of these specialized services, and hospitals were establishing specialized services regardless of the potential for sharing. Controls should be established by State and local health-planning agencies over the number of specialized services developed in a community, to ensure that medical needs are met in the most economical and effective manner. (See pp. 25 to 33.)

Recent legislation--Public Law 91-296--increases Federal financial participation in projects involving the sharing of health services. It should provide hospitals which are seeking Federal grant funds with an incentive to share services.

Hospitals in the San Francisco Bay area have cooperated in organizing certain services, such as laundry services and supply-purchasing services. Officials said that these cooperative ventures saved money and space and avoided duplication of facilities. (See pp. 34 to 36.)

## CHAPTER 1

### INTRODUCTION

#### HILL-BURTON PROGRAM

Title VI of the Public Health Service Act (42 U.S.C. 291), commonly known as the Hill-Burton program, authorizes the Public Health Service (PHS), Department of Health, Education, and Welfare (HEW), to make grants to States for the construction of medical facilities. PHS, under the Hill-Burton program, requires each State to designate a single agency to administer the program and to annually prepare for each designated health service area of the State a plan projecting the need for medical facilities and comparing that projected need with the resources expected to exist.

The California Department of Public Health, hereinafter referred to as the State agency, is designated to administer the Hill-Burton program. This agency also issues licenses to operate hospitals and nursing homes, makes certification inspections for Medicare and Medicaid, and approves designs and specifications for medical facility projects. In accordance with the method prescribed in PHS guidelines, the State agency annually estimates the need for hospital and skilled-nursing-care beds for the ensuing 5 years for the State of California.

We did not evaluate the appropriateness of the methodology prescribed by PHS for use in arriving at these estimates. We accepted the State plan estimates of the status and projected need of medical facilities in the San Francisco Bay area. PHS guidelines for preparing the State plan do not require that PHS, Veterans Administration, or military hospitals, or the days of care that were rendered in these facilities, be considered in the planning process.

The hospital bed needs for each service area are estimated by analyzing hospital usage, population, and the relative rapidity of population increase. The skilled-nursing-care bed needs in each service area are estimated by analyzing usage in existing skilled-nursing-care facilities, population, age distribution, and the relative rapidity of population increase.

To arrive at a projected average daily census of patients, the State agency multiplies the projected population by the current use rate (the number of days of inpatient care in the most recent year for each 1,000 population) and divides the result by 365. The resulting average daily census is divided

by 80 percent for hospitals and by 90 percent for skilled-nursing-care facilities to arrive at an estimate of beds needed, assuming an 80-percent occupancy rate for hospitals and a 90-percent occupancy rate for skilled-nursing-care facilities.

This provides an estimated 20- or 10-percent vacancy rate to meet emergencies. An extra 10 beds are added to the estimated number of hospital beds needed as an additional precaution that emergency patients can be treated.

The achievements of the Hill-Burton program include a significant improvement in the availability of health facilities, modernization of inadequate facilities, development of health-planning processes, and identification of ways to improve the health care system.

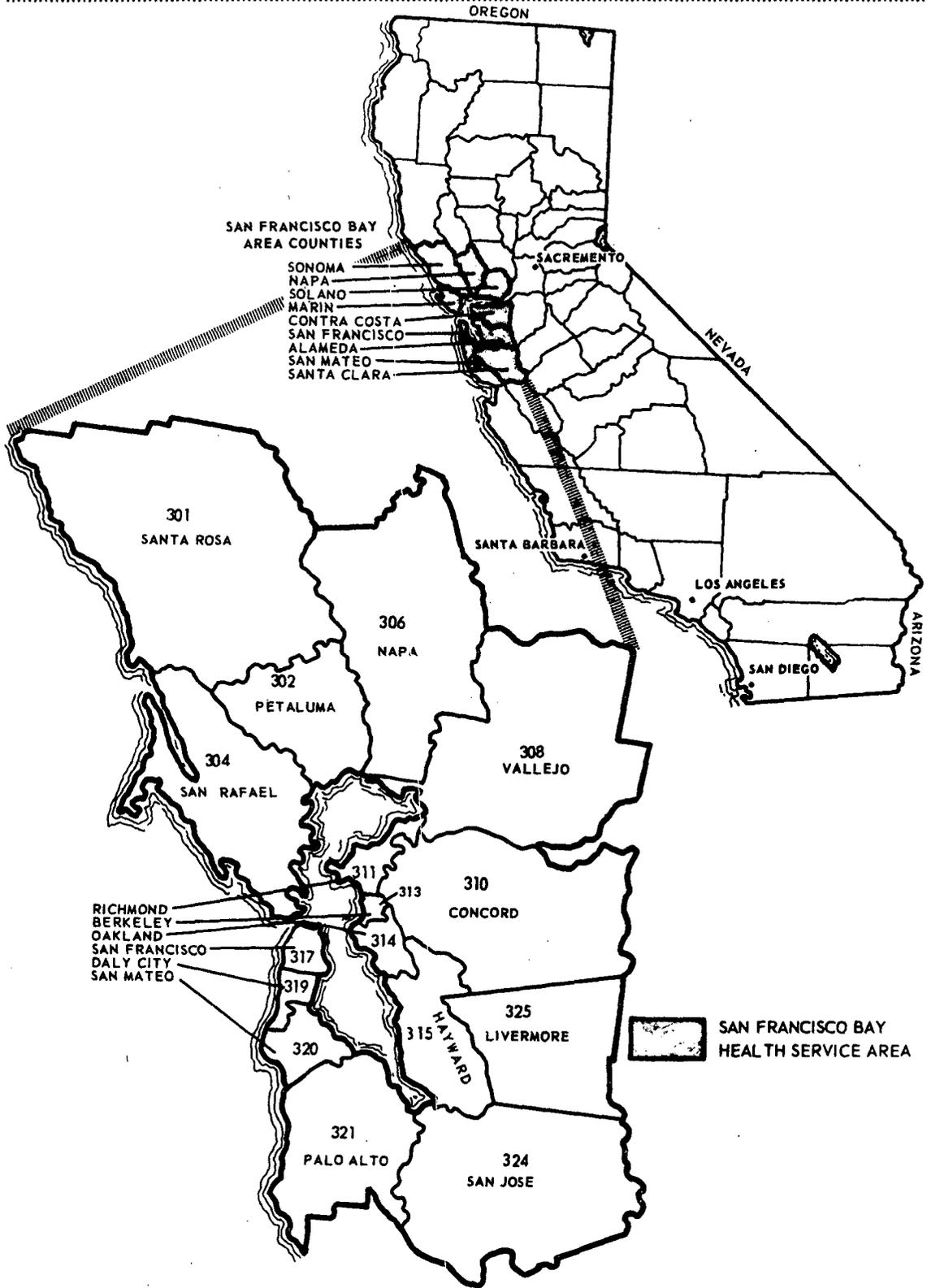
#### SAN FRANCISCO BAY AREA

The San Francisco Bay area covers about 7,500 square miles and encompasses old urban centers and new suburban communities. The overall population, as shown by the 1970 census, is about 4.5 million. Since 1960 this area has experienced a population growth of about 1 million. Within the San Francisco Bay area, there are a variety of health resources, ranging from university medical schools to neighborhood health centers. Services offered cover a wide spectrum of medical knowledge with training opportunities available locally for most medical fields.

In carrying out the purposes of the Hill-Burton program, the State agency has subdivided the San Francisco Bay area into 16 health service areas. A service area is defined as a specific identified community served by health facilities located within the community's boundaries. The 16 health service areas established for the San Francisco Bay area generally are consistent with PHS guidelines which require a 30-minute maximum travel time in metropolitan area from residence to a hospital. The following map illustrates the location of each of the 16 service areas included in our review.

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**SAN FRANCISCO BAY HEALTH SERVICE AREA**



As of January 1971, 102 acute-care hospitals were in existence, under construction, or approved for construction in the San Francisco Bay area. Of the 102 acute-care hospitals, nine are operated by the Federal Government--four by the Veterans Administration, one by PHS, and four by the Department of Defense. Also there are 73 diagnostic and treatment centers, 44 public health centers, and 203 community mental health centers.

Diagnostic and treatment centers provide services for outpatients. A public health center is a community outpatient facility, providing services to prevent disease, prolong life, and maintain a high degree of physical and mental efficiency. These centers were not included in our review.

Generally there are two types of nursing-care facilities: (1) those which provide care for convalescent or chronic-disease patients requiring skilled nursing care and which are under the general direction of persons licensed to practice medicine or surgery in the State and (2) those which provide primarily domiciliary care. Only the facilities providing skilled nursing care qualify for Hill-Burton grants. Our review included only those facilities providing skilled nursing care. As of January 1971 there were 344 nursing-care facilities in the San Francisco Bay area providing skilled nursing care.

#### OTHER HEALTH-PLANNING ACTIVITIES

Public Law 89-749, approved November 3, 1966, created the Partnership for Health Program which introduced the concept of comprehensive health planning. Under this new type of planning, it is envisioned that both providers and consumers of health services will participate in determining health needs and resources, establishing priorities, and recommending courses of action.

The objectives of the Partnership for Health Program centered on voluntary planning and the development of a comprehensive health plan to reflect the needs and the priorities of each State. The California Department of Public Health is the agency responsible for the Partnership for Health Programs within California.

In the San Francisco Bay area, the Bay Area Comprehensive Health Planning Council is the areawide comprehensive health-planning agency funded under the Partnership for Health Program. This council is designated by the State as the agency responsible for reviewing the needs for health facilities in

the 16 health service areas in the nine San Francisco Bay area counties.

The impact of comprehensive health planning on facilities construction in California is only beginning to be felt. Although the Partnership for Health Program deals with more than facilities planning, the role developing within California for comprehensive health planning is intended to ensure the orderly development of health facilities.

By means of legislation California established, beginning on January 1, 1970, regulatory controls over the development of inpatient facilities which are required to be licensed by the State Department of Public Health and the State Department of Mental Hygiene.

Specifically these controls require that the State Departments of Public Health and Mental Hygiene not approve construction plans or issue a license for changes in bed capacity or for the conversion of existing bed capacity to a different licensing category, except for outpatient and emergency services, until the applicant has received approval from the areawide comprehensive health-planning agency.

The State legislation establishing comprehensive health planning exempted all projects with complete applications on file prior to January 1, 1970, from comprehensive health-planning review and approval.

Other local organizations involved in comprehensive health planning are the California Committee on Regional Medical Programs, the California Hospital Association, the Hospital Council of Northern California, and a number of other professional organizations.

Numerous organizations are involved in planning for health care needs; these organizations include the various health professions, voluntary planning associations, the State and Federal Government, and others. Current efforts involving many of these organizations are being directed toward a comprehensive State plan relating to overall health needs. Efforts toward the comprehensive health plan are the result of the Partnership for Health Programs. The voluntary organizations known to do health planning in the area rely, to some extent, on the data available in the State agency's plan for hospitals and related facilities.

Federal agencies participating in the development of local health facilities include HEW, which funds construction of hospitals, long-term-care facilities, diagnostic and treatment centers, public health centers, neighborhood clinics, and training facilities under the Hill-Burton program; the Department of Commerce, which funds the construction of a neighborhood health center; the Department of Housing and Urban Development, which guarantees and insures loans for the construction of hospitals and nursing homes; the Small Business Administration, which funds construction of hospitals and nursing homes; and the Office of Economic Opportunity (OEO), which funds construction and operation of neighborhood health centers.

The Veterans Administration, PHS, and the Department of Defense also provide health facilities in the San Francisco Bay area; these facilities generally are restricted to use by such persons as veterans, seamen, and military personnel, respectively.

Since the enactment of the Hill-Burton program, Federal participation in projects improving health resources in the San Francisco Bay area has totaled more than \$122.5 million. The following table shows the Federal support by agency since enactment of the Hill-Burton program.

Federal Financial Assistance to  
Health Facilities in the San Francisco Bay Area  
From January 1, 1948, to December 31, 1970

<u>Category</u>	<u>Total</u>	HEW (note a)	SBA (note b)	Department of Commerce (note c)	FHA (note d)	OEO (note e)
(000 omitted)						
Hospitals	\$ 83,144	\$71,029	\$ 815	\$ -	\$11,300	\$ -
Nursing homes and long- term-care units	21,444	3,114	2,067	-	16,263	-
Health centers	<u>18,030</u>	<u>2,519</u>	-	<u>1,530</u>	-	<u>13,981</u>
Total	<u>\$122,618</u>	<u>\$76,662</u>	<u>\$2,882</u>	<u>\$1,530</u>	<u>\$27,563</u>	<u>\$13,981</u>

<sup>a</sup>HEW grants do not include training facilities or HEW community health centers.

<sup>b</sup>Amounts represent loans and guarantees and include the funding of a long-term psychiatric unit.

<sup>c</sup>Amount represents grants.

<sup>d</sup>FHA amounts are primarily mortgage insurance commitments and include applications in process.

<sup>e</sup>OEO health center grants include facility and operating funds.

## CHAPTER 2

### CONSTRUCTION OF HOSPITALS

According to the 1970 California State plan prepared by the State agency, the San Francisco Bay area will need about 16,588 non-Federal hospital beds by 1974.

As of January 31, 1971, the bed capacity of non-Federal hospitals in operation and under construction in the San Francisco Bay area was 17,423--835 beds in excess of the 1974 projected need. As of January 31, 1971, facilities for 472 additional hospital beds, which had reached advanced stages of planning, had not been included in the 1970 State plan. Therefore by 1974, if construction of the additional facilities is completed, the San Francisco Bay area could have 1,307 non-Federal hospital beds in excess of the 1974 need projected in the State plan.

We noted that about three fourths of the hospitals in the San Francisco Bay area had experienced occupancy rates below 80 percent during fiscal years 1968, 1969, and 1970. Local hospital officials informed us that the factors contributing to the lower occupancy rates were, for example, changes in patient-care requirements and excess acute-care hospital beds available in the bay area.

### CHANGES IN HOSPITAL BED CAPACITY

Following is (1) a comparison of the hospital bed capacity in each service area, as of January 31, 1971, with the bed needs projected for 1974 in the 1970 State plan and (2) the Federal hospital bed capacity in each service area.

Service area	Bed capacity shown in the 1970 State plan (note a)	Net increase or decrease (-) in beds 4-1-69 to 3-31-70 (note b)	Net increase or decrease (-) in beds 4-1-70 to 1-31-71 (note c)	Planned for construction as of 1-31-71	Projected bed capacity by 1974	1974 bed need projected in 1970 State plan	Federal hospital bed capacity
301-Santa Rosa	540	27	10	-	577	535	-
302-Petaluma	141	-	38	-	179	173	-
304-San Rafael	497	-1	-2	-	494	540	55
306-Napa	226	-	-	-	226	215	-
308-Vallejo	548	-	-	-	548	434	385
310-Concord	943	-	-	204	1,147	1,027	498
311-Richmond	540	-	-	-	540	511	-
313-Berkeley	395	-	-	-	395	394	-
314-Oakland	1,942	168	48	-	2,158	1,805	1,150
315-Hayward	1,061	3	55	118	1,237	1,095	-
317-San Francisco	5,013	31	-	-	5,044	4,786	1,580
319-Daly City	285	-	-	-	285	306	-
320-San Mateo	818	71	3	-	892	869	-
321-Palo Alto	1,580	17	12	-	1,609	1,608	1,993
324-San Jose	2,054	178	72	150	2,454	2,194	-
325-Livermore	110	-	-	-	110	96	451
<b>Total</b>	<b>16,693</b>	<b>494</b>	<b>236</b>	<b>472</b>	<b>17,895</b>	<b>16,588</b>	<b>6,112</b>

<sup>a</sup>Based on 1970 California State plan which used March 31, 1969, as the cutoff date for the inclusion of data in the plan.

<sup>b</sup>Based on State agency information.

<sup>c</sup>Changes in bed capacity, as provided by officials of the State Health Facilities Planning and Construction Bureau.

As the above table shows, the San Francisco Bay area could have about 17,895 beds in operation by 1974 if the plans of local hospital officials are carried out. On the basis of these plans and the existing hospital bed capacity, we estimate that by 1974 the San Francisco Bay area could have as many as 1,307 beds in excess of the need shown in the 1970 State plan. Recent enactment of legislation in California, which requires the review and approval of health facility projects by the regional comprehensive health-planning agency, should curtail the development on unneeded medical facilities. (See pp. 23 and 24 for further discussion.)

### UTILIZATION OF HOSPITAL BEDS

To measure the utilization of non-Federal hospital facilities in the San Francisco Bay area, we obtained, from the Bay Area Comprehensive Health Planning Council, occupancy rates during fiscal years 1968, 1969, and 1970 for the hospitals in the 16 health service areas. The table below shows the occupancy ranges of hospitals during these 3 fiscal years.

Occupancy range	Number of non-Federal hospitals		
	Fiscal years		
	<u>1968</u>	<u>1969</u>	<u>1970</u>
80 and above	18	27	21
65 to 79	54	51	44
64 and under	<u>20</u>	<u>14</u>	<u>29</u>
Total	<u>92</u>	<u>92</u>	<u>94</u>

PHS regulations prescribe an occupancy factor of 80 percent for use in computing the number of beds required for each service area. San Francisco HEW Regional Office officials stated that the 80-percent occupancy factor was not a minimum or a maximum but an acceptable occupancy rate for planning purposes. These officials stated that the 80-percent occupancy factor was considered to be adequate to yield a sufficient return on capital investment to maintain and provide for efficient hospital operations.

Our review showed that about three fourths of the hospitals in the San Francisco Bay area had been experiencing occupancy rates below 80 percent during fiscal years 1968, 1969, and 1970.

PHS, the comprehensive health-planning council, and a private study have indicated that the composite utilization

rate may not be the most valid method for measuring occupancy for planning purposes. There are four major categories of hospital services: medical-surgical, pediatric, obstetric, and psychiatric.

We analyzed the occupancy rates for each of these categories and determined that certain categories of hospital services were utilized at rates significantly lower than others. Generally occupancy rates for pediatric and obstetric services were well below the rates for medical and psychiatric.

The following tables show the occupancy rates experienced by the San Francisco Bay area hospitals during fiscal year 1970 for the four major categories of health services.

Range of occupancy rates (percent)	Number of hospitals <u>medical-surgical</u>
80 and above	32
65 to 79	35
64 and under	22
Range:	
High 93.0%	
Low 31.1%	

Range of occupancy rates (percent)	Number of hospitals		
	<u>Pediatric</u>	<u>Obstetrics</u>	<u>Psychiatric</u>
70 and above	9	13	16
40 to 69	40	32	5
39 and under	14	16	-
Range:			
High	93.3%	97.5%	97.0%
Low	15.0%	12.6%	50.0%

The statistics are based on the 1970 annual reports submitted by the hospitals to the comprehensive health-planning council.

The low hospital occupancy rates (see p. 12) were discussed with various hospital officials in the San Francisco Bay area. These officials stated that the following factors have contributed to low occupancy rates.

1. Change in patient-care requirements.
2. Decreases in the average length of stay.

3. Facilities with specialized services competing for patients.
4. Excess acute-care hospital beds available in the bay area.

HOSPITAL BED SPACES WHICH DO NOT CONFORM TO HILL-BURTON CONSTRUCTION STANDARDS

The 1970 State plan showed that 2,805 bed spaces, located in 29 of the 93 non-Federal hospitals in the San Francisco Bay area, did not conform to Hill-Burton construction standards. These construction standards include such factors as fire resistivity, safety, design, and structural elements affecting the function of nursing units and service departments.

Although the State plan noted that 2,805 bed spaces required modernization, these bed spaces were recognized in the State plan (as required by PHS regulations) as being available to meet current and future patient-care needs. These beds were included in the total of 16,693 existing beds available to meet the projected patient-care requirements of 16,588 beds by 1974.

Hill-Burton construction standards and State licensing requirements for existing hospitals differ in certain aspects. Therefore a facility which does not conform to Hill-Burton construction standards may meet State licensing standards and would be considered safe for patient care and would be licensed to operate.

Hospital beds in the San Francisco Bay area, except those in State or Federal facilities, are subject to State licensing requirements. Each hospital is subject to an annual inspection by officials of the State Department of Public Health and by the State fire marshal, to determine compliance with State standards before a license can be issued or renewed.

Accompanied by a State Hill-Burton inspector, we visited six of the 93 hospitals containing 820 of the 2,805 nonconforming bed spaces shown in the 1970 State plan, to review the conditions in these facilities. The State Hill-Burton inspector said that the conditions in the six hospitals did not constitute a hazard and that the hospitals were safe for patient care. At the time of our site visits, four of the six hospitals had plans for modernization, replacement, or expansion of existing facilities, which hospital officials believed would make their facilities conform to Hill-Burton construction standards.

During the past 6 years, the State agency, in accordance with the State-wide emphasis on modernization, reallocated funds from new construction of hospital and public health centers and long-term-care facilities to modernization and replacement of hospitals. The following table shows the total reallocation during the 6-year period.

	Fiscal years 1965 through 1970	
	<u>Original allocations</u>	<u>Revised allocations</u>
Hospitals and public health centers	\$40,079,000	\$29,681,000
Long-term-care facilities (nursing homes)	21,140,000	5,866,000
Diagnostic and treatment centers	6,253,621	10,347,964
Rehabilitation facilities	3,169,843	7,503,469
Modernization	8,716,000	26,010,000

Since fiscal year 1966 the State plans have shown a marked decrease in the number of nonconforming hospital beds in the San Francisco Bay area, as shown in the following table.

Data As Shown In State Plan

<u>State plan</u>	<u>Beds existing</u>	<u>Beds noncon- forming</u>	<u>Nonconforming beds as a percent of existing beds</u>
1970	16,693	2,805	17
1969	16,706	3,877	23
1968	16,727	4,909	29
1967	16,505	4,643	28
1966	16,039	5,554	35

## CHAPTER 3

### CONSTRUCTION OF SKILLED-NURSING-CARE FACILITIES

PHS guidelines state that skilled nursing care is 24-hour care which is sufficient to meet the total nursing needs of all patients. This care requires the employment of at least one registered professional nurse or licensed practical nurse in charge of each tour of duty. Facilities providing primarily domiciliary care were not included in our review.

According to the 1970 State plan, the San Francisco Bay area will need 21,861 non-Federal skilled-nursing-care beds by 1974. As of January 31, 1971, the bed capacity of non-Federal skilled-nursing-care facilities in operation and under construction in the San Francisco Bay area was 28,828 beds--6,967 beds in excess of the 1974 projected need.

Our review showed that development of skilled-nursing-care bed capacity in the San Francisco Bay area exceeded the need projected in the 1970 State plan in 14 of the 16 health service areas. Following is a comparison of the skilled-nursing-care bed capacity in each service area, as of January 31, 1971, with the bed needs projected for 1974 in the 1970 State plan.

Service area	Bed capacity shown in 1970 State plan (note a)	Net increase or decrease (-) to January 31, 1971 (note b)	Total bed capacity January 31, 1971	1974 bed need	
				projected in 1970 State plan	Excess of beds over need
301-Santa Rosa	1,127	-9	1,118	794	324
302-Petaluma	454	92	546	334	212
304-San Rafael	1,307	183	1,490	1,231	259
306-Napa	836	-67	769	603	166
308-Vallejo	883	312	1,195	695	500
310-Concord	1,806	586	2,392	2,256	136
311-Richmond	788	-	788	627	161
313-Berkeley	573	-78	555	598	-43 <sup>c</sup>
314-Oakland	2,474	164	2,638	2,065	573
315-Hayward	3,756	213	3,969	3,445	524
317-San Francisco	4,429	896	5,325	3,300	2,025
319-Daly City	386	307	693	301	392
320-San Mateo	975	945	1,920	960	960
321-Palo Alto	1,385	101	1,486	1,438	48
324-San Jose	3,387	417	3,804	2,922	882
325-Livermore	163	-23	140	292	-152 <sup>c</sup>
<b>Total</b>	<b>24,729</b>	<b>4,099</b>	<b>28,828</b>	<b>21,861</b>	<b>6,967</b>

<sup>a</sup>Based on data shown in California 1970 State plan.

<sup>b</sup>Based on information provided by the State agency.

<sup>c</sup>Negative figure indicates that capacity is less than the projected need.

UTILIZATION OF  
SKILLED-NURSING-CARE FACILITIES

On the basis of patient-day statistics for calendar year 1968, we estimated that the average occupancy rate for skilled-nursing-care facilities in the San Francisco Bay area was about 77 percent. These statistics were the most recent statistics available at the time of our review. We noted that an occupancy factor of 90 percent was prescribed in PHS regulations for use in computing the number of beds needed in a service area.

The following table shows the occupancy rates for each of the 16 health service areas in the San Francisco Bay area on the basis of patient-day statistics for calendar year 1968.

<u>Service area</u>	<u>Occupancy rate</u> <u>(percent)</u>
301-Santa Rosa	80.4
302-Petaluma	58.2
304-San Rafael	72.2
306-Napa	69.9
308-Vallejo	84.5
310-Concord	89.2
311-Richmond	65.5
313-Berkeley	92.3
314-Oakland	87.3
315-Hayward	70.8
317-San Francisco	76.7
319-Daly City	71.0
320-San Mateo	75.2
321-Palo Alto	87.0
324-San Jose	69.9
325-Livermore	91.8

The table shows that only two of the 16 service areas were operating above the 90-percent occupancy rate used for determining bed needs.

Current occupancy statistics were not available for facilities in all areas; however, occupancy rates were available for 31 of 46 skilled-nursing-care facilities operating in the San Jose service area as of December 31, 1970, and are shown below.

Occupancy Factors  
San Jose Area Skilled-Nursing-Care Facilities

Occupancy rate (percent)	Facilities	Calendar year 1970	
		Number	Percent of total reporting
Reporting	31		
90 and above		17	55
80 to 89		6	19
Under 80		8	26
Not reporting	<u>15</u>	—	—
Total	<u>46</u>	<u>31</u>	<u>100</u>

In addition, a State study released in May 1970 indicated that about 41 percent of all skilled-nursing-care facilities in California were operating below 90-percent occupancy.

Low utilization, which is a natural result of excess medical facilities, generally results in higher operating costs for each patient-day. Since the Government reimburses skilled-nursing-care facilities under the Medicare and Medicaid programs, the Government can be expected to share in the higher operating costs.

The State Bureau of Health Facilities concluded, in a study concerning the occupancy rates of skilled-nursing-care facilities, that the number of facilities with 100 beds or more increased State-wide from 37 in 1965 to 222 in 1970. This shows a definite trend toward larger facilities. The State study indicated that larger facilities had lower occupancy rates. The study indicated also that the average occupancy rate for skilled-nursing-care facilities of 100 beds or more was about 73 percent.

NURSING HOME BED SPACES WHICH DO NOT CONFORM  
TO HILL-BURTON CONSTRUCTION STANDARDS

The 1970 State plan shows that 3,817 bed spaces, located in 43 of the 324 skilled-nursing-care facilities, did not conform to Hill-Burton construction standards. These construction standards include such factors as fire resistivity, safety, design, and structural elements affecting the function of the nursing units and service departments.

Although the State plan noted that 3,817 bed spaces required modernization, these bed spaces were recognized in the State plan (as required by PHS regulations) as being available

to meet current and future patient-care needs. These beds were included in the total 24,729 existing beds available to meet the projected 1974 patient-care requirements of 21,861 beds.

Skilled-nursing-care facilities participating in the Federal Medicare and Medicaid health care programs also are required to meet structural and operational standards established by the Social Security Administration. These standards are guidelines to help State agencies evaluate existing structures which do not meet Hill-Burton construction regulations that were in effect at the time the State agency performed its survey of skilled-nursing-care facilities. These guidelines also are used to evaluate in each facility those aspects of the skilled-nursing-care facility which are not covered by Hill-Burton regulations.

About 94 percent of the California skilled-nursing-care facilities are certified for participation under the Federal Medicare and/or Medicaid programs. We visited seven of the 43 skilled-nursing-care facilities containing 233 of the 3,817 nonconforming bed spaces shown in the 1970 State plan to review the type and extent of variances from Hill-Burton construction standards, their effect on the capacity of the facilities to meet future patient care needs, and their effect on patient safety.

We were accompanied during our visits by a State Hill-Burton architect who said that these facilities were licensed annually and were considered safe for patient care.

Since fiscal year 1966, the State plans have shown a marked decrease in the number of nonconforming skilled-nursing-care beds in the San Francisco Bay area. The following table illustrates this decrease.

Data As Shown In State Plan

<u>State plan</u>	<u>Beds existing</u>	<u>Beds nonconforming</u>	<u>Nonconforming beds as a percent of existing beds</u>
1970	24,729	3,817	15.5
1969	22,206	3,997	17.9
1968	18,272	4,127	22.5
1967	19,373	4,591	23.6
1966	16,668	4,990	29.9

## CHAPTER 4

### COORDINATION AND CONTROL OVER DEVELOPMENT

#### OF MEDICAL FACILITIES

Our review of federally assisted hospital and skilled-nursing-care-facility projects showed that (1) the Department of Housing and Urban Development was fostering the development of health resources through its Model Cities Program, (2) FHA was providing assistance through mortgage insurance commitments, and (3) SBA was providing direct loans and loan guarantees.

We noted that, under the Model Cities Program, the Model Cities project area was not consistent with the health service area used in the State plan. As a result, the Model Cities project area may show that a health facility is needed, whereas the State plan health service area, in which the project is located, may show that a health facility is not needed.

FHA and SBA recently have instituted procedures which state that they will not provide financial assistance for a proposed medical facility unless the State agency has issued a certificate of need. The certificate of need is issued by the State agency on the basis of the need for a proposed medical facility as shown in the State plan.

In January 1970 the State of California enacted legislation that required the review and approval of health facility projects by the regional comprehensive health-planning agency before a license to operate was granted. We believe that this legislation and the development and consistent application of uniform criteria for determining a need for a facility by the comprehensive health-planning agency should curtail the development of unneeded medical facilities.

#### COORDINATION OF FEDERAL PROGRAMS ASSISTING IN THE CONSTRUCTION OF MEDICAL FACILITIES

We examined hospital and skilled-nursing-care-facility projects to determine whether federally sponsored projects had been approved on a basis consistent with health service requirements. Our assessment of the need for medical facilities provided with Federal financial assistance was based on the California State plan. Following is a description of the major programs of each Federal agency involved in hospital and/or skilled-nursing-care-facility construction in the San Francisco Bay area.

## Department of Housing and Urban Development

The Department of Housing and Urban Development is fostering the planning and development of health resources through its Model Cities Programs. At the time of our fieldwork, the local Model Cities Program officials said that the Department had not funded the construction of hospitals or skilled-nursing-care facilities. We noted that several proposals for local Model Cities projects made reference to health facilities.

The objectives of one Model Cities project included (1) the establishment of a prepaid medical plan, (2) the development of a paramedical-training program, and (3) the construction of a 200-bed inpatient-care facility. We discussed these objectives with the Model Cities planner who explained that existing facilities were generally inaccessible to Model Cities residents due to the cost of services in relation to the income level of the population. Therefore the area desired a facility and a program that would be free of this constraint. He agreed that the State plan assessment of bed needs would be correct were it not for the financial condition of area residents. Other Model Cities Programs are in the planning process but have not yet defined their long-term health objectives.

## Federal Housing Administration

FHA has provided financial assistance for the construction of one hospital and 21 skilled-nursing-care facilities in the San Francisco Bay area. Areawide, this agency made mortgage insurance commitments of about \$28 million during the period September 1959 to December 1970.

FHA guidelines provide that a certificate of need be obtained from the State agency before FHA is allowed to insure a mortgage for a medical facility. We noted that FHA had been coordinating its efforts with the State agency and had been requiring that a certificate of need be obtained by the applicant from the State agency before FHA would insure a mortgage. We noted also that FHA had procedures adequate for ensuring that such certificates of need were obtained from the State agency prior to insuring a mortgage.

## Small Business Administration

SBA has funded the construction of health facilities through the Small Business Financial Assistance and Disaster Loan Programs. SBA's financial assistance is restricted to profit-oriented organizations. With regard to providing financial assistance to health facilities, SBA regulations provide that:

"Hospitals will be considered small when their capacity does not exceed 150 beds (excluding cribs and bassinets) at the time of the application for the loan."

\* \* \* \* \*

"Nursing homes will be considered small when they have an annual dollar volume of receipts not exceeding \$1 million."

During the period 1962 to 1970, SBA provided loans and guarantees of about \$2.9 million for three hospitals and four skilled-nursing-care facilities, exclusive of psychiatric facilities, in the San Francisco Bay area.

Our review showed that, before January 1970, SBA had made loans and guarantees which had resulted, in several instances, in the construction of facilities in excess of the need shown in the State plans.

A report by the Senate Committee on Government Operations in April 1970 noted that financial assistance by SBA had not been confined to areas showing a need for facilities in the State plan. Hence Federal financial assistance contributed to the establishment of excess facilities.

The report cited the Vallejo, California, hospital situation where a Hill-Burton grant had been provided in March 1966 to Vallejo General Hospital for modernizing its existing 62 beds and increasing its bed capacity by 37 beds. After increasing its bed capacity, the hospital had experienced a very low occupancy rate and had more than half of its 99 beds empty. The report noted that the underutilization of the facility was placing the hospital in a financial dilemma.

The report noted that the major factor which had caused the underutilization was the nearby Broadway Hospital which had increased its bed capacity from 30 to 90 beds and which was taking patients away from other hospitals. Part of this expansion was assisted by SBA which granted a loan in October 1968 to the Broadway Hospital. State agency officials stated that SBA had not discussed the project with their office and that the State plan in effect at that time had indicated an excess of beds in the area.

Our review showed that, during fiscal year 1970, the Vallejo General Hospital and Broadway Hospital had experienced occupancy rates of 51.7 and 68.3 percent, respectively.

We noted that, in addition to the facilities discussed in the Senate Committee's report, the following skilled-nursing-care facilities in the San Francisco Bay area had been provided with financial assistance by SBA between 1965 and 1969, even though the State plan in effect at that time indicated that there was no need for the facilities.

Bassard Convalescent Hospital (loan guarantee)	\$270,000
Ellens Nursing Home (direct loan)	10,000
Montara Coastside Convalescent Hospital (direct loan)	12,000

SBA's efforts to establish need for the skilled-nursing-care facilities listed above included contacts with county welfare departments and the State Department of Public Health. In each case the State plan indicated, at the time of approved financing for these facilities, that a need for additional facilities did not exist.

We reviewed SBA records for these projects to determine whether SBA had contacted the State agency to ascertain whether there was a need for the skilled-nursing-care facilities requesting assistance. The records did not show any contacts between SBA and the State agency. One skilled-nursing-care-facility owner stated that SBA was not concerned with the need for his facility but was only interested in his ability to repay the loan.

In January 1970 SBA established a policy which required that a certificate of need for a proposed facility be obtained from the State agency before SBA provided financial assistance. Since January 1970 SBA has not provided any financial assistance for medical facilities in the San Francisco Bay area.

#### CONTROLS OVER MEDICAL FACILITY DEVELOPMENT

Until recently the development of hospital and skilled-nursing-care facilities took place without restrictions concerning the needs of the community. Restrictions initially were developed in the form of licensing requirements over the physical plant relating to patient safety. The Hill-Burton legislation developed a process for determining bed need to assist in the distribution of scarce Federal funds. Hill-Burton grant funds would not be provided for the construction of a medical facility unless there was a demonstrated need shown in a State plan for such a facility.

Recently FHA and SBA have instituted procedures which state that financial assistance will not be provided unless

there is a demonstrated need by the State agency for a proposed medical facility. In this way control to limit Federal funding of excess medical facilities is maintained. Prior to January 1970 regulatory control relating to community need did not exist for privately funded medical facilities.

Because overbuilding of health facilities wastes public funds and results in higher patient-day costs, additional efforts, such as the Partnership for Health Program legislation on the Federal level (see discussion on p. 7) and comprehensive health-planning legislation in California, have sought to remedy this condition by controlling the development of medical facilities.

The California comprehensive health-planning law took effect January 1, 1970. This law, commonly referred to as State Assembly Bill 1340, requires the review and approval of the need for proposed health facility projects by the regional comprehensive health-planning agency before licenses to operate may be granted by the State Department of Public Health.

We found that the bay area medical facilities needs, as determined by the State plan criteria, were substantially met prior to the establishment of the comprehensive planning law. Comprehensive health planning is a significant change from previous methods of planning for new medical facilities built with private financing, because the establishment of hospital and skilled-nursing-care facilities not assisted by Federal financing is subject to review and approval by an areawide council on the basis of community need.

The organization and concept of the comprehensive health-planning agency is new, and the agency is in the process of developing criteria for determining the need for medical facilities. The local comprehensive health-planning agencies have committed themselves to complete areawide plans during 1972.

We believe that, with the development and consistent application of uniform criteria for determining need, the comprehensive health-planning agency will be better able to review the need for proposed medical facilities and thereby to curtail the development of medical facilities which are not needed for patient-care needs.

## CHAPTER 5

### CONTROL OVER DEVELOPMENT OF SPECIALIZED MEDICAL SERVICES

A report<sup>1</sup> by the Advisory Committee to the Secretary of Health, Education, and Welfare on Hospital Effectiveness stated that the most promising opportunities for advances in hospital effectiveness might be expected to result from the combined efforts of health-care institutions, areawide planning agencies, and State licensing authorities to encourage and, when necessary, demand the development of cooperative programs among institutions.

This report also noted that planning agencies and licensing authorities must make decisions for shared services on the basis of total effectiveness for the whole population rather than on the basis of institutional autonomy or the convenience of individual physicians. The sharing of medical services and equipment helps to reduce the cost of hospital services.

Section 113 of Public Law 91-296 provides that States are entitled to receive Hill-Burton grant funds up to 90 percent of a project's cost if the project offers potential for reducing health-care cost "through shared services among health care facilities" or "through interfacility cooperation." This legislation, which increases Federal financial participation in those projects which involve sharing, should provide hospitals which are seeking Federal grant funds with an incentive to share services.

Our review showed that numerous specialized services for the treatment of specific illnesses were offered by hospitals in the San Francisco Bay area. As discussed on page 9, Federal medical facilities generally are restricted to use by such persons as veterans and military personnel. The Veterans Administration is specifically authorized, by law, to enter into agreements with private medical facilities for the sharing of facilities, equipment, and services. For three specialized services (open-heart surgery, radiation therapy, and kidney dialysis), we compared the capacity of these services in the San Francisco Bay area with the patient case load.

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<sup>1</sup>Secretary's Advisory Commission on Hospital Effectiveness Report, U.S. Government Printing Office (Washington: 1968), pp. 15 and 16.

Our review showed that there were open-heart-surgery and radiation-therapy facilities in excess of patient needs. Also kidney-dialysis services were underutilized. Many physicians, hospital administrators, and health planners that we contacted during our review concurred in these findings. They said that they believed that the increase in the number of unneeded specialized services offered in hospitals did not service the best needs of the community nor result in the best approach to good medical care.

We noted that no authority existed for controlling the establishment of these specialized services; consequently a hospital could establish specialized services regardless of the potential for sharing existing facilities. We believe that controls should be established by State and local health-planning agencies over the number of specialized services being developed in a community, to ensure that the medical needs of the community are met in the most economical and effective manner.

#### OPEN-HEART SURGERY

Our review showed that eight non-Federal and three Federal hospitals in the San Francisco Bay area offered open-heart-surgery services. In addition, one other non-Federal hospital was equipped to offer this service and expected to begin its open-heart surgical program soon.

The capacity and utilization rates of the open-heart-surgery facilities are shown in the following table.

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	<u>Total operations</u>	<u>Potential capacity (note b)</u>	<u>Percent of utilization</u>
Non-Federal hospitals (note a):			
Children's Hospital Medical Center	29	60	48
Samuel Merritt Hospital	50	70	71
University of California Med- ical Center	200	300	67
Presbyterian Hos- pital of Pacific Medical Center	200	400	50
Mt. Zion Hospital	24	150	16
Stanford University Hospital	534	534	100
Santa Clara Valley Medical Center	120	250	48
San Jose Hospital and Health Center	<u>19</u>	<u>50</u>	<u>38</u>
	<u>1,176</u>	<u>1,814</u>	<u>65</u>
Federal hospitals:			
Military (note c)	88	100	88
Veterans Adminis- tration, San Francisco (note d)	41	100	41
Veterans Adminis- tration, Palo Alto (note d)	<u>98</u>	<u>200</u>	<u>49</u>
	<u>227</u>	<u>400</u>	<u>57</u>
Total	<u>1,403</u>	<u>2,214</u>	<u>63</u>

<sup>a</sup>Based on hospital data for calendar year 1970.

<sup>b</sup>Based on discussions with hospital officials.

<sup>c</sup>Based on hospital data for calendar year 1970.

<sup>d</sup>Based on hospital data for fiscal year 1970.

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The American Heart Association states, in its Standards for Cardiac Diagnostic and Surgical Centers, that center personnel who are responsible for the diagnosis and treatment of defects of the heart require training and extensive experience which, in turn, are related to an optimal case load. The standards provide that the necessary concentration of elaborate equipment, highly trained technical personnel, and skilled professional supervision can be justified only by a continuing daily use of equipment and personnel in diagnostic, operating, and patient-care areas in response to a demonstrated continuing community need.

Doctors contacted during our review were concerned with the overall development of open-heart-surgery facilities. Doctors at San Francisco Bay area open-heart-surgery facilities generally agreed that potentially higher case loads did exist, especially in the area of coronary-artery surgery. Furthermore many of these doctors said that they believed that existing facilities could handle this potential case load and that conditions did not warrant the establishment of additional open-heart-surgery facilities.

We noted that, in addition to the above-listed hospitals that were engaged in open-heart surgery, a non-Federal hospital was equipped for, and prepared to offer, this service. Most of the doctors that we contacted in the area were critical of the establishment of this unit.

One of the doctors expressed concern that this hospital was not aware of the financial aspects of operating an open-heart-surgery unit. He said that his hospital spent over \$100,000 a year for special cardiovascular supplies needed in the operating room. Another doctor commented that he did not know where this hospital would get its patients. A third doctor stated that this new unit was being established for prestige purposes.

The doctor in charge of the proposed open-heart-surgery facility stated that the hospital would be able to perform 50 to 150 open-heart operations a year and that, if the hospital could not perform at least 50 operations a year, it would function as a diagnostic center. He stated that, in his opinion, however, a large undetected population in the bay area was in need of open-heart surgery.

We were informed by hospital officials that no regulations existed for controlling the establishment of open-heart-surgery units; consequently a hospital could offer this service, regardless of the potential for sharing existing facilities. Doctors contacted during our review generally agreed that there was a need for some control over the development of open-heart-surgery facilities.

Officials of the Bay Area Comprehensive Health Planning Council stated that an adequate supply of open-heart-surgery facilities existed in the San Francisco Bay area to care for the patient needs of the area. These officials advised us that they expected to develop guidelines for evaluating the need for open-heart-surgery facilities in the future.

### RADIATION THERAPY

Radiation-therapy services in the San Francisco Bay area are provided in physicians' offices, Federal and non-Federal hospitals, and a tumor institute. On the basis of criteria established by the Committee for Radiation Therapy Studies, the capacity of existing facilities is almost double that of the expected case load. Additional facilities are being constructed, however, and others are being considered for construction.

In the San Francisco Bay area, 35 non-Federal and five Federal facilities were offering radiation-therapy treatment. Available statistics did not permit direct comparison of the capacity and use of radiation-therapy facilities. On the basis of guidelines, published by the Committee for Radiation Therapy Studies, entitled "A Prospect for Radiation Therapy in the United States," facilities in the San Francisco Bay area have the capacity to handle about 11,000 new patients annually.

We estimated, on the basis of statistics published by the American Cancer Society, that, in the San Francisco Bay area, about 6,300 patients required radiation therapy in 1970 and about 7,300 would require radiation therapy during 1974. Therefore the existing capacity of handling 11,000 new patients annually exceeds area requirements by about 4,700 and could exceed the projected area requirements for 1974 by 3,700.

We were told by various health officials that the number of physicians trained in radiation therapy limited the availability of the service nationally. Within the San Francisco Bay area, however, sufficient trained physicians were available to meet the needs of the area. We found that about 40 trained radiation therapists and a number of radiologists were practicing in the area. In addition, 36 residents were being trained locally in three major centers.

Physicians contacted during our review indicated that a trained radiation therapist could treat about 30 patients daily. Using a 5-day workweek, or 250 workdays a year, and an average 24 visits for each patient, a physician could treat about 300 new cases annually. On this basis we estimated

that the 40 radiation therapists could handle about 12,000 new patients each year. This capability is almost double the current case load of about 6,300 cases.

We were informed by various health officials in the bay area that radiation-therapy units had been added on a facility-by-facility basis without regard to areawide needs. Hospital officials advised us that four radiation-therapy units were opened during 1970 and that six units were being planned.

Physicians, hospital administrators, and other professional medical people have commented on the radiation-therapy capability in the San Francisco Bay area. Some of their statements are as follows:

A hospital administrator--There is no need for additional radiation-therapy facilities in the area. Two facilities with megavoltage recently have been added. Our utilization has dropped from 125 to 88 patients daily.

A physician--There should be some guidelines to control the number of facilities offering radiation therapy. As it is now, facilities are offering the service because some of the hospital administrators don't like the idea of sending their patients to other facilities for the service.

A physician and a regional medical program planner--California is oversupplied with radiation therapists and facilities. The Regional Medical Program helps perpetuate these facilities by providing radiation-physics support.

We have been informed by radiation therapists and hospital administrators that excess capacity would continue to be created. They have cited the following reasons.

1. A physician dislikes to refer a patient to another institution because the physician may lose management of the patient's care.
2. Therapy facilities draw patients to a medical facility and thus improve hospital utilization.
3. At present fees, therapy facilities pay their own way even with relatively low utilization.
4. Therapy facilities are considered a necessary part of a complete medical center.

Although controls do not exist in the San Francisco Bay area to limit the establishment of radiation-therapy facilities, the Bay Area Comprehensive Health Planning Council is reviewing guidelines for possible adoption of such controls.

### KIDNEY DIALYSIS

Kidney dialysis, commonly referred to as hemodialysis, is a method of treating patients with kidney disease or kidney failure. In the San Francisco Bay area, 17 facilities offer hemodialysis treatment. Of the 17 facilities, three are located in Federal hospitals. The 17 facilities have a capacity to treat 143 patients annually and, at the time of our fieldwork, had a case load of 112--a utilization rate of about 75 percent.

Officials at these facilities stated that increased staffing and additional work shifts could increase the capacity by about 79 patients--a total capacity of about 222 patients a year in the San Francisco Bay area. With this additional capacity, these facilities would be about 50-percent utilized, which would provide capacity for future patient demand. During our review plans for additional facilities, as well as for expansion of existing facilities, were being developed.

Hemodialysis is handled in two ways: (1) by a machine located in a hemodialysis facility or (2) by a unit, smaller and less costly than the hospital unit, installed in a patient's home after the patient has received a period of training in a hemodialysis facility. Medical officials explained that, wherever possible, home units are preferable because of reduced costs to patients, greater convenience to patients, and release of hospital beds for other patients.

The Bay Area Comprehensive Health Planning Council and the California Committee on Regional Medical Programs have concluded that additional facilities were not needed in certain areas. For example, the council's staff evaluated the need for hemodialysis capability in the San Rafael service area (304) and found a potential case load of eight for the service area, which, they concluded, could be easily handled by facilities in adjoining areas. Accordingly they recommended that a hemodialysis facility not be installed in the San Rafael area. At the close of our field review, a facility had not been installed in the San Rafael area.

The associate director of the California Committee on Regional Medical Programs stated that hemodialysis facilities could be quickly installed since the machines were small and available and since the required personnel could be trained

in a short period of time. Thus a minimum of advanced planning was required, compared with planning required for other specialized services, such as open-heart surgery.

We noted that areawide comprehensive planning for hemodialysis facilities had not been undertaken at the time of our field review. Officials of the California Committee on Regional Medical Programs informed us that they were in the process of developing plans for wider, more effective cooperative arrangements among existing hemodialysis facilities so that institutions and resources could form comprehensive systems of care.

The annual cost for each patient for hemodialysis in a hospital is between \$20,000 and \$30,000. We were told that the average patient was unable to meet the high cost of continued dialysis and must rely on other sources for financial assistance. In California the Medi-Cal Program is the primary source for continuing support of hemodialysis patients.

Under the Medi-Cal Program a patient must have virtually no funds to qualify for the program. Although home-training of the patient can reduce the long-run cost of dialysis to some degree, the initial cost is still high. Specialists in the field indicated that the first year's cost was about \$13,000 to \$25,000 for a patient on a home-training program and that the costs in the following years would be about \$5,000 a year.

Some specialists stated that the Medi-Cal requirements were not equitable in this respect. They indicated that Medi-Cal's requirement that a patient must have virtually no funds tended to stifle his incentive to continue his life in a manner useful and productive to society.

The cost of hemodialysis can be reduced by promoting hemodialysis facilities in less costly settings. Our review showed that the cost to a patient for hemodialysis ranged from \$170 to \$275 for each dialysis in hospital-based hemodialysis facilities. One hemodialysis facility, which was located adjacent to a hospital but which did not have the costly equipment and services of a hospital that are not required by hemodialysis patients, however, was providing the service to 21 patients at a cost of \$155 for each dialysis. Certain reductions are expected to bring the cost down to \$130 for each dialysis.

Specific controls do not exist over the development of hemodialysis facilities in the San Francisco Bay area. The Bay Area Comprehensive Health Planning Council has made recommendations as to the need for additional facilities and was

in the process of reviewing possible guidelines to control the future development of facilities.

The Medi-Cal Program offers a method of control because hemodialysis facilities must be certified as meeting State established medical standards for treatment of hemodialysis patients before the State Medi-Cal Program will reimburse the facility for the treatment of Medi-Cal patients. We were told that most chronic dialysis patients eventually come under the Medi-Cal Program because they cannot pay the high cost of dialysis treatment. Therefore, if the Medi-Cal Program would not certify a facility for reimbursement, when a need for additional facilities did not exist, additional facilities would probably not be established.

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According to physicians and hospital administrators contacted during our review, specialized services were being established by general hospitals in the San Francisco Bay area without regard to the areawide needs. For example, 11 hospitals offer open-heart surgery, 35 offer radiation therapy, and 17 offer hemodialysis. These persons said that they believed that duplication of specialized services in excess of area requirements was not necessary and could have been avoided through areawide cooperation and planning.

We were told by representatives of the Bay Area Comprehensive Health Planning Council that the council was concerned with the proliferation of specialized services and was studying the matter of formulating guidelines on the establishment of such services. They said that they were concerned, however, about their legal authority to regulate specialized services and that they therefore had requested a ruling by the State attorney general as to their authority. At the completion of our fieldwork, no ruling had been made.

Officials of the council stated that they believed that the council had the responsibility to develop adequate planning criteria to ensure the orderly establishment of specialized services consistent with areawide needs. Furthermore they stated that all proposed projects, including those federally sponsored for specialized services, should be subjected to the council's review and approval as to the need for the medical service on the basis of patient-care requirements.

## CHAPTER 6

### SAVINGS POSSIBLE THROUGH COOPERATIVE USE

#### OF SUPPORTIVE SERVICES

The benefits to hospitals for the development and use of common supportive services have been recognized by hospital administrators and by the Hospital Council of Northern California. Hospitals receive financial and other advantages through pooling resources for supply purchasing, laundry service, maintenance, and other nonmedical services.

Some hospitals in the San Francisco Bay area have cooperated to organize certain supportive services. We reviewed the operation of a cooperative laundry service and two group-purchasing programs to ascertain the benefits realized by such arrangements. Officials of the participating organizations stated that these cooperative ventures offered savings and other advantages, such as avoiding duplicate facilities and saving space.

#### COOPERATIVE LAUNDRY SERVICE

The reasons for the cooperative laundry service include avoiding the cost of duplicate facilities, equipment, and personnel and maintaining control over service, which control is not possible when commercial laundries are used.

The local cooperative laundry service that we visited began operation during August 1968; seven hospitals participated in its initial organization and financing. Laundry service representatives said that \$2.5 million was borrowed from non-Federal sources for the development of a plant capable of servicing about 5,000 hospital beds. At the time of our field review, 14 hospitals having a total of 3,200 beds were participating in this service.

Laundry service representatives cited a variety of benefits from the service's operation, including financial savings and space savings. The cooperative laundry service had made one study which had estimated savings of \$25,000 for one hospital during 1970.

The cooperative laundry service is offering its service to other hospitals in the area. One hospital joined the program during our review. Officials of this hospital stated that they believed that this service offered potential for savings

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by avoiding duplication of facilities and limiting the requirements for additional hospital space.

### GROUP PURCHASING

Group purchasing is participating hospitals purchasing as a group and benefiting through larger buying power.

During our review we noted that hospitals in the San Francisco Bay area were participating in either of two group-purchasing programs. We examined into the two programs to determine the possible benefits to hospitals participating in such programs. These programs differed in size and were based on different methods of procurement. The particulars of each program are discussed below.

One group, which was established in 1962, consisted of 17 nonprofit hospitals having a total of 3,050 beds. These 17 hospitals, with the exception of one in Oregon, were located in northern California. The hospitals contract with a single distributor of various brands of medical supplies and equipment. Member hospitals buy all of their supplies from this distributor and deal directly with the distributor when ordering and paying. Overhead for the program is assessed on the basis of the number of hospital beds so that each hospital pays a proportionate share based upon the size of the hospital.

The director of the group-purchasing program stated that, because of greater volume and a predictable market, the distributor was willing to reduce its profit margin. He stated also that hospitals gained because they had the privilege of using brands of their preference and still achieved a significant savings.

The director indicated that member hospitals had been able to achieve between a 10- and 15-percent overall saving on their purchases through their participation in the program. He cited savings of 500 percent on medical gases and 18 percent on domestic X-ray film as examples.

The other group-purchasing program consisted of 130 private and nonprofit hospitals. Of these hospitals, 17 are located in northern California and have a combined bed capacity of 3,139 beds. This program is sponsored by the Hospital Council of Southern California although it is functionally separate from the hospital council.

The executive director of the hospital council stated that yearly contracts were negotiated with manufacturers and suppliers for particular products at an anticipated volume

and that member hospitals chose the products they wished to purchase through the program. According to one of the program's officials, member hospitals need not participate in, and are not participating in, all products and product groups offered by the program. In contrast to members of the other group-purchasing program, members of this program can buy from any supplier or manufacturer.

The operating organization for the 17 northern California hospitals estimated that savings of \$228,858 were realized during calendar year 1970.

## CHAPTER 7

### SCOPE OF REVIEW

Our review of hospital and skilled-nursing-care-facility construction in the San Francisco Bay area was performed at PHS, Region 9, San Francisco, California; the State Department of Public Health, Sacramento, California; and hospitals and skilled-nursing-care facilities in the nine counties of the San Francisco Bay area.

Our review included:

- An examination into areawide needs for inpatient facilities and an inventory of existing and planned facilities.
- A review of Federal programs funding health facilities and their relationship with other health facility programs.
- An examination into specialized hospital services, including contacts with 68 hospital representatives, of whom 47 were physicians; examination of utilization records; and discussions with health planners.
- Site visits and discussions with 33 representatives of hospital and skilled-nursing-care facilities and 14 representatives of local organizations involved in health planning.
- A review of pertinent material available on Federal assistance for facility construction and areawide health planning.